Fig. 1

4004	B. halodurana C. seetobutylicum - WKNSKEMQKLQTTS YKEGNECIPVELOG STRANSSTSTAFORM DOCKLYFFMLLERI'L ROPRHIJALKRYKSH KGSYGODHOVELL BRED3-2065 FalcaligemesHatur HPPVGVAVSLVTWQ KFPNETVIPVEQK STRANSSTSTAFORM COMPANIATION	HKNSKEMOKLOTTS	15 16 30 TEX KEGMSCEIRVELON MO KEPTAETVIPNPGGK	13 16 30 31 45 46 60 61 73 78 78 78 78 78 78 78 78 78 78 78 78 78	60 DDCKLYETNLLERIL HALLERIL TWINAEPDTLMERUL	SRENLIGALERVEKN DRONDMLAYKRVKSN ARDNLITALKRVEAN APANLERAYGRVVSN	46 60 61 73 76 90 90 90 90 90 90 90 90 90 90 90 90 90	38 8 8
4004	B.helodurans C.acetobutylicum Bet603-2065 PalcaligenesHatur		120 121 EII EGSYEPKPURNEID KEN SIF NGKYCPKAURNEID KED DIL AGTYRPAPURNGID KEG RIL AGEYHPQAV <u>RAVEID</u> RO	GGVRKLGIP GGIRLLGIP GGTRQLGIP GGTRQLGIP	135 136 150 151 TWO DRELOQAIAQILZDE 199 TWO DRELOQAIAGELTPE F0P STW DRELOQALAGELTPE F0P STW DRELOGALAGGLTPE F0P	151 YDPTESERSFGFRPH FERTFSENSYGFRPK FDPPESPSFGFRPG FDPLFSDYSYGFRPG	165 166 180 RPH RRGHANKOAKOPHK RPK RSAKOAIKKAKEYME RPC RRAHDANROAGOSTO RPG RSTHQAIEMARAHVT	126 179 128 180
4 20 20 40	B.halodurans C.acetobutylicum Bar803-2065 PalcaligenesHatur		195 196 KFF DKVNHDRLARKLSSR 109 KFF DVNHDRLARLARLASKR IXO KFF DRVHDLLASKNARV WG KFF DRVHDLLASKNARV WG I	225 PRVLQLIRRILQ KRVLKLIRLYLQ KRVLKLIRAYLQ KCVLRLIRRYLE	226 240 241 252 255 255 270 TEVERGLASSPEP TO TEVERGLASSPEP TO-CORRESPONDENT ATTABLESPENDENT 255 255 SOWHINGOVERETE TO-CORRESPONDENT ATTABLESPENDENT 255 ANTIGONOVERETE TO-CORRESPONDENT TO-CORRESPONDENT TO-CORRESPONDENT 255 ANTIGONOVERETE TO-CORRESPONDENT TO-CORE	255 TPGGGPLSPLLSNIV CPGGGPLSPLLSNIM TPGGGPLSPLLSNIM TPGGGPLSPLLSNIM IV	255 256 270 270 270 270 271 271 271 271 271 271 271 271 271 271	216 269 218 270
4 4 4 4	B.halodurans C.acetobutylicum BstB03-2065 PalcaligenesMatur		286 300 301 AGENTEEN FLEN FLEN AGENVESTEEN FLAN AGENVESTERFEEN TLAN AGENTVSVERFEER FLAN AGENTVSVERFEER FLAN V	231 285 286 300 301 315 316 330 331 345 346 360 360 361 362 362 362 362 362 362 362 362 362 362	316 PHNRKFLGFSFTRGK PHNRKLGFTFYQMY PWKRAFLGFSFTPER AWKCDYLGYGMSWHO	345 -DPHARVSKESVKRL GKIGTRVHEKSVKRF -KARIRLAPRSIQRL -QPRLRVARMSLDRL	345 346 KRI KORIRELTSRRHEM KKF KAKIKAITARSHALH QRL KORIRQLYHENNSIE DRL RORLMELRSVRARK	359
H 21 E 4	B.halodurans C.acetobutylicum Bate03-2065 PalcaligenesMatur		181 G 17 390 391 SOBLEARMYING LOTYOVOTPSILAG IDA FENITERING TOTTO ATTACK LOP FORTILLE NOVOTHER TOTTO ATTACK LOP MATTERING MATTERING ATTACKETPOUT IDE MATTERI	18 0. 17 31 310 331 340 351 465 405 405 405 405 432 435 435 455 455 455 455 455 455 455 455	406 EWKTTSAROKHLVAL GIK OMKKVKTKYDHLAKF GIN OMKRVRTRIRELRAL GLA OMKOPPTRLANLARL GLA	421 GIKKAKAMQMANSRK GYM GINNSKAWERAPIRK SYM GLKETAVWEIANTRK GAM GLSEERANKSAFNGR GPM	436 CYWRVAHSPIMDYAL SYWRIANSPILSTTL GAWRTTKTPOLHQAL GPWANSGAQHWNYAL	395 449 449

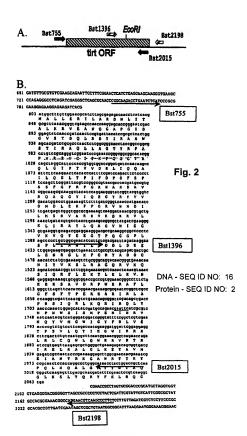
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"X" Domain

1 - SEQ ID NO: 13

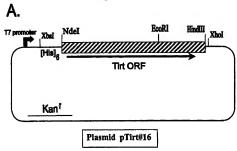
4 - SEQ ID NO: 15

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Replacement Sheet

Fig. 8



B.

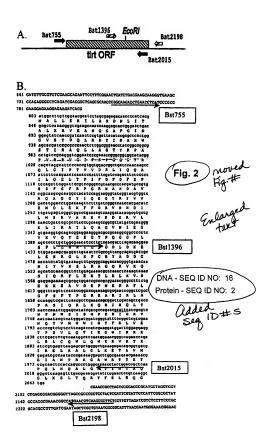
DNA Sequence - SEQ ID NO: 17 Amino Acid Sequence - SEQ ID NO: 18

Fig. 1

	1 15	15 16 30			;		
1.6.halodurans 2 C.acetobutylicum 3 Bat803-2065 4 PalcaligenesMatur	- HKNSKEMOKLOTTS	YKEGMSCE IRVELQN KFPTAETVI PNPGQK	STRAHS I STAFOR PRVMPDSAKVPAA	42 - 46 - 47 - 47 - 47 - 47 - 47 - 47 - 47	60 61 61 61 61 61 61 61 61 61 61 61 61 61	76 90 KGSYGVDEHDVKSIR KGSHGVDGHKVDELL QGAPGIDGVSTDQLR KGAPGADGHTVADLA	9888
1 B.halodurans 2 C.acetobutylicum 3 Bet03-2065 4 PalcaligenesMatur		105 106 12 ELI EGSYFPKPWRWZIP SIF NGKYCPKAVRRWZIP QLL AGTYRPAPVRRWGIP RLL AGEYHPQAV <u>RAWZIP</u>	11 IDS 106 120 121 121 135 136 136 139 131 136 136	135 136 150 151 TW DRELOCALAQILIQL YDE YOU DRELOCALAQILIQL EKE TW DRLICOALLOELTPI FORE SW DRLICOALCOOLTPI FDRI I	151 TOPPTSERSTERPEN REGINANDAKONA 126 ENTYSENSTERPEN REMOJATIONAKONA 126 ENDPESPESTERPE REMOJATIONAKONA 126 ENDPESPESTERPE RAMINANDANOCTO 128 ENDPESPESTERPE RETROLLEMARANT 180	166 RRGHMAVRQAKÇMMK 126 RSAKQATKKAKEYNE 179 RNAHDAVRQAÇĞYIQ 128 RSTHQAIEMARANY 180	126 179 180
1 B.halodurans 2 C.acetobutylicum 3 Bart03-2063 4 PælcaligenesHatur		210 KRF DKVNHDRLARKLSSR KKF DTVNHDKLALLVARK KRF DRVNHDILLHSRVARK KRF DRVNHDILHSRVARK KRF DRVNHDILHSRVARK	211 1GDERVLGLIRRILD IKDERVLKLIRLYLD VKDKRVLKLIRAYLD IKDKCVLRLIRRYLE	226 240 241 TGVBRGLVSPHIEG TRO SGVHINGVVSETERG CPR AGWHEGWYGTERD TRO AGIMSGGVVSPROEG IPO	241 255 TPGGEPLSPLLSNIV CPGGEPLSPLLSNIV TPGGEPLSPLLSNILL IV	256 LDELDWELEKRGLKF LTELDRELEKRGHKF LDDLDWELEKRGKKF LDELDRELEKRGKFF	216 218 270
1 B.halodurana 2 C.acetobutylicum 3 Bate03-2065 4 PalcaligenesMatur		286 300 AGDRVHESVTSTEN AGDRVHESTTRETEN AGRVKQSIQRELEK AGERVLVSVER <u>PLRE</u>	315 RLALKYMREKSAVDR KLALKYMREKSAVDR TLALKYMEEKSAVDR RLALLYMRKKSQVAR VI	316 330 331 BANKELGESTRAK - DPKHRUSKEVKR. PRIKATAGESTRAK - DPKHRUSKEVKR. PRIKATAGESTPR VARTBARRSURA. ANKONZOGOSHIQ - GPRIKAMBRSURA. VII	331 345 346 -DPKHRVSKESVER KQR GKIGIRVHEKSVER KAR -KARIRLARESJOEL KORN -OPRLRVARHSLORL ROB	346 360 KQRIPELTSRRHSHK KAKIKAJTARSHALH KORIRQLTHWESIS RDRLRHTENSVRARK	305 307 359
1 B.halodurans 2 C.acetobutylicum 3 Bata03-2065 4 PalcaligenesMatur	261 27 G 361 375 MSDRLRELNRYLTGW IENRIIKLRQCIIGN MPERIHRVNQYVMGW MATVIERINVLRGW	77 376 390 LGYQVUDTPSILAQ LNYFGIAEMTKLAKK IGYRLVETPSVAGT ASTKLAGSKRFLEE	405 IDAWI RRELRHIRNK LDEWTRRELRHCTHK IEGHI RRELRICOML	406 EWKITSAROKNIVEL GIK GWKKVWIYKYDNIRKF GIN GWKRYRIRIRELRAL GIK GWKOPPIRLRNIAND, GIS	421 GINKAKAMGHANSRK GYMRVAHSPIHDYAL GINKSKAKEDANRK KYNEIJANSPILASTY GLEKTAMEIJANRK GAMETPEROLMOLI GLESERAMKSAINGR GPMANSGAQHMAYAL	436 GYMRVAHSPIMDYAL SYMRTANSPILSTTL GAWRTTKTPQLAGAL GPWNSCAQHAWYAL	395 449 449
1- SEC	- SEQ ID NO: 13) (2	"x" Domain 2 - SEQ ID NO: 14	14 3 - SEQ ID NO:	\mathcal{L}	4 - SEQ ID NO: 15	(5)	

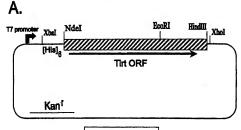
Enlarged text added Seg 10#5

Replacement Sheet



Replacement Sheet





Plasmid pTirt#16

B.

T7 promoter

- 1 TOGHNUNAGT NTTTAAACCT TTGHACCGCC NTAATACHAC TCACTATAGG
- lac operator
 51 GGAATTGTGA GCGGATAACA ATTCCCCTCT AGAAATAATT TTNTTTAACT
- 51 GOBATIVION COMMUNICATION TO THE TEST OF THE TEST OF
- 151 cageggeetg gtgccgcgcg gcagcatat gcggcaagac ctgaatetca S G L V P R G S H M R Q D L N L I
- 201 tcccgcggaa ggagaagatc acgatggctt tgttggaacg catcttagcg
 PRKEKITMALLERILA
 > start of Tirt ORF
- 251 agagacaacc tcatcacggc gctcaaacgg gtcgaagcca accaaggagc R D N L I T A L K R V E A N Q G A

DNA Sequence - SEQ ID NO: 17
Amino Acid Sequence - SEQ ID NO: 18